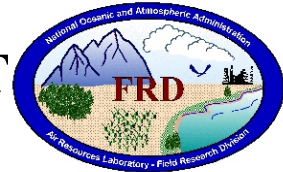




# FRD ACTIVITIES REPORT

## July 2005

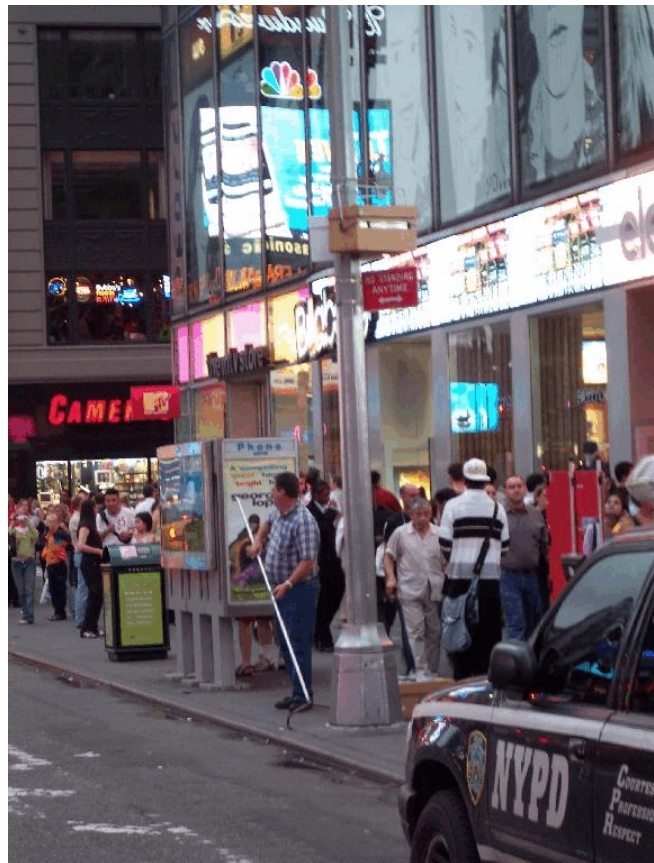


### Research Programs

#### *New York City Study*

Preparations were concluded this month for the Urban Dispersion Program (UDP) scheduled to begin in August. The conditioning of the continuous analyzers was completed in the laboratory while supplies and equipment were packed for the cross-country trip to New York City. Roger Carter provided continuous analyzer, sampler, and safety training for those people involved in the release, operation and sampler servicing portions of the study. Training was greatly modified for this complex study and covered 3.5 days. Included in the training were classroom lectures and discussions, written tests, videos and hands-on operation of the continuous analyzers and samplers. (Roger Carter 208-526-2745, Debbie Lacroix)

An SF<sub>6</sub> background study in New York City was conducted from July 9-14 to further determine any fugitive sources of SF<sub>6</sub> in the intended study area. Six sites were selected for this study: three sites along 7<sup>th</sup> Ave. at 45<sup>th</sup>, 49<sup>th</sup>, and 54<sup>th</sup> Streets (focusing on Times Square); one at Rockefeller Center on 5<sup>th</sup> Ave. and 49<sup>th</sup> St.; and two sites on Park Ave. on 46<sup>th</sup> and 54<sup>th</sup> Streets (focusing on Grand Central Terminal). One hour bag samples were taken at all 6 sites continuously over the 5-day sample period. Sample cartridges from the study were returned to FRD via Yellow Freight the last week of July. All bags were immediately analyzed to provide insight into the background concentration levels in the area of interest. The analysis was completed in three days and the summary of the results was provided to the FRD Director. The SF<sub>6</sub> background levels were higher than anticipated and previously measured by a mobile real-time analyzer in January 2004. The sources of the SF<sub>6</sub> can hopefully be determined after analysis of wind directions obtained during the background study. These results will be shared with the UDP study director to provide information that may lead to possible sampling modifications for this study. (Kirk Clawson, 208-526-2742, Debbie Lacroix, Roger Carter, and staff)



FRD bag samplers on street light poles in Times Square.

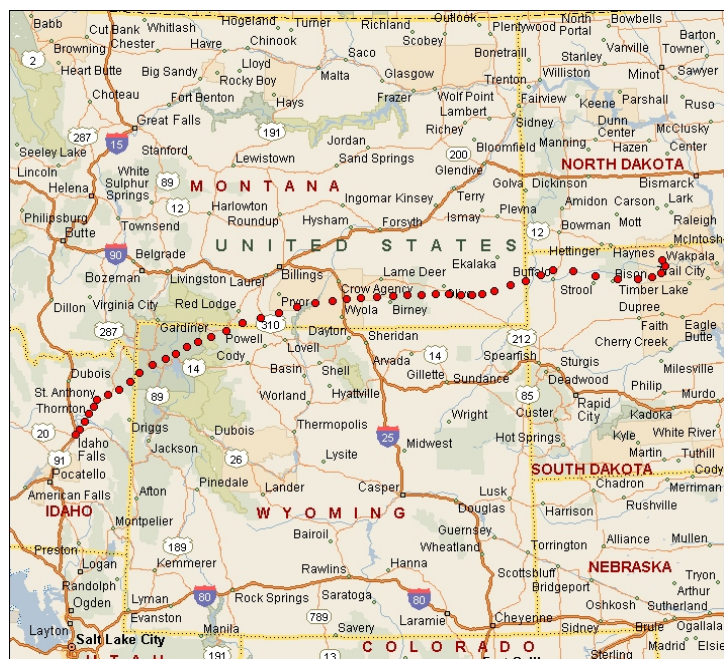
## ***ET Probe***

Progress was made in fits and starts during July on a manuscript describing the ET probe development. One issue that took some time was tracking down specifications for the various pressure and temperature sensors used on the probe. The manuscript is now about 50% complete. It is intended for submission to the *J. Atmos. Ocean Tech.* (Richard Eckman, 208-526-2740)

Although ARL is not deploying ET probes this year, we were able to provide some assistance to the other hurricane intercept teams we have been collaborating with. During Hurricane Ivan last year, ARL was able to use personal contacts to deploy at a Navy airfield called NOLF Wolf. In July of this year, Hurricane Dennis struck the Gulf Coast at nearly the same place as Ivan. NOLF Wolf appeared to again be an ideal deployment location. ARL staff was able to assist the Texas Tech hurricane intercept team, lead by Dr. John Schroeder, in gaining access to Wolf for Dennis. In past years, ARL has coordinated with the Texas Tech team during hurricane deployments. (Richard Eckman, 208-526-2740; Phil Hall and Ed Dumas, ATDD)

## ***Smart Balloon***

In preparation for a hurricane deployment in late August, a smart balloon test flight was conducted in July. The balloon was released from FRD in Idaho Falls and tracked 900 miles to Isabel, South Dakota. It was in flight for over 27 hours and performed flawlessly. A chase team following in a van tracked the balloon using GPS and a laptop. The team recovered the balloon and the entire instrument package. Development of a real-time web display of the balloon track and the raw data output were completed. The flight track and data for this test flight can be seen at the following urls: <http://www.noaa.inel.gov/balloontk> and <http://www.noaa.inel.gov/display>. (Randy Johnson, Shane Beard, Brad Reese)



## **Cooperative Research with DOE NE-ID (Idaho National Laboratory)**

### ***Emergency Operations Center (EOC)***

FRD participated in a drill at the INL EOC on 27 July. Because of the last-minute preparations related to the New York City tracer study, only one staff member was able to attend the drill. Nonetheless, the NOAA participation in the drill went smoothly. (Richard Eckman, 208-526-2740)

## **Other Activities**

### ***Safety***

The Crime Prevention Resources video “Laptop Larceny” was shown at the monthly staff meeting. (Debbie Lacroix, 208-526-9997)

### ***Visitors***

On July 13, Dr. Steven Businger and Ryan Ellis from the University of Hawaii met with Randy Johnson and other FRD staff. Their visit was related to the deployment of the Smart Balloon in the upcoming RAINEX experiment.

Jennifer Hutton, a Ph.D. candidate in Atmospheric Science from Indiana University, paid a visit to FRD on 29 July. She was given a tour of the facilities and held discussions with the management staff. During the afternoon she presented a talk entitled “Investigating Isoprene Dynamics in a Forest Canopy Using an Analytical Lagrangian Model”. (Richard Eckman, 208-526-2740, Kirk Clawson, Paula Fee)

### ***Travel***

On July 8-15, Kirk Clawson traveled to New York City, NY to conduct a background SF<sub>6</sub> study for the Urban Dispersion Program.

On July 29-August 1, FRD contractors Jason Rich and Tom Strong drove government-owned vehicles containing samplers, equipment, supplies, etc. to New Jersey/New York for the Urban Dispersion Program. They will be joined by Kirk Clawson, Roger Carter, Neil Hukari, Katherine King, Camille Erwin, and David Stubbs on August 1.

### ***Personnel***

On July 11, Camille J. Erwin, Katherine A. King, and David D. Stubbs reported to work as Student Temporary Employment Program (STEP) federal employees. This is an excepted (intermittent) appointment not to exceed one year. The students attended a one-week training at FRD in preparation for their support to the New York Urban Dispersion Program in August. They will return to college this fall.